

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) Protein mixture comprising:
  - (a) at least a first fusion protein comprising:
    - i) a protein or protein fragment,
    - ii) an interaction domain and
    - iii) a protein translocation sequence which effects that the fusion protein upon expression in a bacterium is translocated through the cytoplasmic membrane in an essentially unfolded state,and
  - (b) at least a second fusion protein comprising:
    - i) a protein or protein fragment,
    - ii) an interaction domain and
    - iii) a protein translocation sequence which effects that the fusion protein upon expression in a bacterium is translocated through the cytoplasmic membrane in an essentially folded state,

wherein the interaction domain of the first fusion protein can bind to those of the second fusion protein, wherein the protein translocation sequence of the first fusion protein is a Sec-dependent, a SRP-dependent or a YidC-dependent sequence, and wherein the protein

translocation sequence of the second fusion protein is a Tat dependent or  $\Delta$ -ph dependent sequence.

2. (Withdrawn) Protein mixture according to claim 1, wherein the protein or protein fragment of the first fusion protein is an immune globulin heavy chain, an immune globulin light chain, a single chain antibody, a diabody, a receptor, a receptor ligand, an integrin, an intimin, a carbohydrate binding protein, an albumin binding protein or protein A.

3. (Previously Presented) Protein mixture according to claim 1, wherein the protein or protein fragment of the second fusion protein is an autofluorescent protein, in particular GFP or a variant thereof, an enzyme, a cofactor-dependent protein, a protein that is encoded by a cDNA derived from a cDNA library or a synthetic protein.

4. (Previously Presented) Protein mixture according to claim 1, wherein the protein or the protein fragment of the first fusion protein is a phage coat protein, a periplasmatic marker enzyme, an intimin, a protein of the outer bacterial membrane or a periplasmatic receptor protein.

5. (Original) Protein mixture according to claim 4, wherein the phase coat protein is selected from the M13 phage coat proteins pIII, pVI, pVII, pVIII and pIX.

6. (Previously Presented) Protein mixture according to claim 1, wherein the interaction domains of the first and the second fusion protein are each respectively a

leucine zipper domain and a leucine zipper domain, a helix-loop-helix-domain and a helix-loop-helix-domain, a calmodulin and a calmodulin binding peptide or a peptid dimer pair of naturally or synthetic origin.

7. (Currently Amended) Protein mixture comprising:

(a) at least a first fusion protein comprising:

- i) a protein or protein fragment,
- ii) an interaction domain and
- iv) a protein translocation sequence which effects that the fusion protein upon expression in a bacterium is translocated through the cytoplasmic membrane in an essentially unfolded state,

and

(c) at least a second fusion protein comprising:

- i) a protein or protein fragment,
- ii) an interaction domain and
- iii) a protein translocation sequence which effects that the fusion protein upon expression in a bacterium is translocated through the cytoplasmic membrane in an essentially folded state,

wherein the interaction domain of the first fusion protein can bind to those of the second fusion protein, Protein mixture according to claim 1, wherein the protein translocation sequence of the first fusion protein is a Sec-dependent, a SRP-dependent, a YidC-dependent sequence or a transport pathway-independent sequence which is integrated into the membrane, and wherein

the protein translocation sequence of the second fusion protein is a Tat dependent or  $\Delta$ -ph dependent sequence.

8. (Canceled)

9. (Previously Presented) Protein mixture according to claim 1, wherein the first fusion protein is covalently or non-covalently bound to the second fusion protein.

10. (Withdrawn) Nucleic acid mixture coding for a protein mixture according to claim 1.

11. (Withdrawn) Nucleic acid mixture according to claim 10, wherein at least two nucleic acids which code for different fusion proteins are covalently attached to each other.

12. (Withdrawn) Vector comprising a protein mixture according to claim 1.

13. (Withdrawn) Cell comprising a protein mixture according to claim 1.

14. (Withdrawn) Library comprising at least two protein mixtures according to claim 1 wherein the proteins or protein fragments of the respective first or the respective second fusion protein are different from each other.

15. (Withdrawn) Method of identifying a substance, which can bind to a protein mixture according to claim 1 comprising the steps:

- a) contacting at least one potentially binding substance with a protein mixture according to claim 1 and
- b) determining of the binding of the potentially binding substance to the protein mixture.

16. (Withdrawn) Method of identifying proteins or protein fragments, which bind to a test substance comprising the following steps:

- a) containing at least one test substance with a library according to claim 14 and
- b) measuring of the respective binding of the test substance to the different protein mixtures, of the library.

17. (Withdrawn) A method according to claim 16 comprising the further steps:

- a) selecting at least one protein mixture, on the basis of the measured binding and
- b) generating a second library wherein the library is generated by modification of the protein or protein fragment comprised in the selected protein mixture.

18. (Withdrawn) Method according to claim 16 comprising the further steps:

- a) selecting at least one protein mixture, one vector or one cell on the basis of the measured binding,
- producing a second library wherein the library is created through the modification of the proteins or protein fragments comprised in the selected protein mixture,
- c) contacting at least one test substance with second library,

- d) measuring of the respective binding of the test substance to the different protein mixtures of the second library and
- e) if the case may be repeating of steps a) to d) until a protein mixture, is selected which exhibits the desired binding.

19. (Withdrawn) Method according to claim 15, wherein in a further step the binding substance of the protein or protein fragment or a variant thereof comprised in the selected protein mixture is mixed with a pharmaceutical acceptable carrier and/or auxiliary substance.

20. (Withdrawn) Kit for the production of a nucleic acid mixture according to claim 10 comprising:

- a) at least a first nucleic acid comprising at least a first restriction site 5' and/or 3' of a nucleic acid coding for a first fusion protein comprising:
  - i) an interaction domain and
  - ii) a protein translocation sequence which effects that the first fusion protein upon expression in a bacterium is translocated through the cytoplasmic membrane upon expression in a bacterium in an essentially folded state.

21. (Withdrawn) Kit according to claim 20 further comprising:

- a) at least a second nucleic acid comprising at least one restriction site 5' and/or 3' of a nucleic acid coding for a second fusion protein comprising:
  - i) an interaction domain and

ii) a protein translocation sequence which effects that the second fusion protein upon expression in a bacterium is translocated through the cytoplasmic membrane in an essentially unfolded state, wherein the interaction domain of the first fusion protein can bind to those of the second fusion protein.

22.– 23. (Cancelled)

24. (Withdrawn) Vector comprising a nucleic acid mixture according to claim 10.

25. (Withdrawn) Cell comprising a nucleic acid mixture according to claim 10.

26. (Withdrawn) Cell comprising a vector according to claim 12.

27. (Withdrawn) Library comprising at least two vectors according to claim 12, wherein the proteins or protein fragments of the respective first or the respective second fusion protein are different from each other.

28. (Withdrawn) Library comprising at least two cells according to claim 13, wherein the proteins or protein fragments of the respective first or the respective second fusion protein are different from each other.

29. (Withdrawn) Method of identifying a substance which can bind to a vector according to claim 12 comprising the steps:

- a) contacting at least one potentially binding substance with a vector according to claim 12,
- b) determining of the binding of the potentially binding substance to the vector.

30. (Withdrawn) Method of identifying a substance which can bind to a cell according to claim 13 comprising the steps of:

- a) contacting at least one potentially binding substance with a cell according to claim 13 and
- b) determining of the binding of the potentially binding substance to the cell.

31. (Cancelled)

32. (Currently Amended) Protein mixture comprising:

- (a) at least a first fusion protein comprising:
  - i) a protein or protein fragment,
  - ii) an interaction domain,
  - iii) a protein translocation sequence, wherein the first fusion protein is in an essentially unfolded state when translocated through the cytoplasmic membrane, and
- (b) at least a second fusion protein comprising:
  - i) a protein or protein fragment,
  - ii) an interaction domain and



- iii) a protein translocation sequence, wherein the second fusion protein is in an essentially folded state when translocated through the cytoplasmic membrane,

wherein the interaction domain of the first fusion protein can bind to those of the second fusion protein, wherein the protein translocation sequence of the first fusion protein is a Sec-dependent, a SRP-dependent or a YidC-dependent sequence, and wherein the protein translocation sequence of the second fusion protein is a Tat dependent or  $\Delta$ -ph dependent sequence.

33. (Currently Amended) Protein mixture comprising:

- (a) at least a first fusion protein comprising:
  - i) a protein or protein fragment,
  - ii) an interaction domain,
  - iii) a protein translocation sequence, wherein the protein translocation domain targets the first fusion protein to a protein translocation pathway which translocates the first fusion protein in an essentially unfolded state through the cytoplasmic membrane,and
- (b) at least a second fusion protein comprising:
  - i) a protein or protein fragment,
  - ii) an interaction domain and
  - iii) a protein translocation sequence, wherein the protein translocation domain targets the second fusion protein to a protein translocation pathway which

translocates the second fusion protein in an essentially folded state through the cytoplasmic membrane,

wherein the interaction domain of the first fusion protein can bind to those of the second fusion protein, wherein the protein translocation sequence of the first fusion protein is a Sec-dependent, a SRP-dependent or a YidC-dependent sequence, and wherein the protein translocation sequence of the second fusion protein is a Tat dependent or  $\Delta$ -ph dependent sequence.

34. (Currently Amended) Protein mixture comprising:

(a) at least a first fusion protein comprising:

- i) a protein or protein fragment,
- ii) an interaction domain,
- iii) a protein translocation sequence, wherein the first fusion protein is in an essentially unfolded state when expressed and translocated through the cytoplasmic membrane,

and

(b) at least a second fusion protein comprising:

- i) a protein or protein fragment,
- ii) an interaction domain,
- iii) a protein translocation sequence, wherein the second fusion protein is in an essentially folded state when expressed and translocated through the cytoplasmic membrane,

wherein the interaction domain of the first fusion protein can bind to those of the second fusion protein, wherein the protein translocation sequence of the first fusion protein is a Sec-dependent, a SRP-dependent or a YidC-dependent sequence, and wherein the protein translocation sequence of the second fusion protein is a Tat dependent or  $\Delta$ -ph dependent sequence.

35. (Currently Amended) Protein mixture comprising:

(a) at least a first fusion protein comprising:

- i) a protein or protein fragment,
- ii) an interaction domain and
- iii) a protein translocation sequence, wherein the first fusion protein is translocated through the cytoplasmic membrane in an essentially unfolded state, and

(b) at least a second fusion protein comprising:

- i) a protein or protein fragment,
- ii) an interaction domain and
- iii) a protein translocation sequence, wherein the second fusion protein is translocated through the cytoplasmic membrane in an essentially folded state,

wherein the interaction domain of the first fusion protein can bind to those of the second fusion protein, wherein the protein translocation sequence of the first fusion protein is a Sec-dependent, a SRP-dependent or a YidC-dependent sequence, and wherein the protein translocation sequence of the second fusion protein is a Tat dependent or  $\Delta$ -ph dependent sequence.

36. (New) The protein mixture according to claim 1, wherein the protein translocation sequence of the first fusion protein is a Sec-dependent sequence.